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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------------|------------------------|
| 10/786,128 | 02/26/2004 | Sukhdeep S. Hundal | VTX0314-US | 1874 |
| 36183 7590 12/31/2007 PAUL, HASTINGS, JANOFISKY & WALKER LLP 875 15th Street, NW Washington, DC 20005 | | | EXAMINER NGUYEN, TUAN HOANG | |
| | | | ART UNIT 2618 | PAPER NUMBER |
| | | | MAIL DATE 12/31/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/786,128 | HUNDAL, SUKHDEEP S. | |
| | Examiner | Art Unit | |
| | Tuan H. Nguyen | 2618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, and 13-22 is/are rejected.
- 7) ☒ Claim(s) 2 and 4-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/2006 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 13-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kloper et al. (US PAT. 6,941,110 hereinafter, "Kloper").

Consider claim 1, Kloper teaches a method for avoiding interference during operation of a first RF device employing a first frequency hopping spread spectrum

protocol, in conjunction with the operation of at least one other RF device employing a different communications protocol (col. 1 lines 56-66), comprising: identifying an interference from the at least one other RF device in the radio communication band (col. 1 lines 56-66); and adjusting of the first device to avoid overlap with the at least one other device, wherein hopping frequencies employed by the first device cluster in one or more frequency ranges (col. 2 lines 7-17, col. 3 lines 52-60, and col. 5 lines 39-59).

Consider claim 13, Kloper teaches a system comprising: a first RF module, wherein the first module employs a first frequency hopping spread spectrum protocol (col. 1 lines 56-66); at least one additional RF module (col. 1 lines 56-66); a first protocol stack and transcoder coupled to the first module (col. 1 lines 56-66); and a system microcontroller in communication with the first module and the at least one additional module, wherein the microcontroller receives and sends instructions through the first module protocol stack and transcoder to adjust the operation frequencies employed by the first module to avoid interference with the at least one other RF module, wherein hopping frequencies employed by the first RF module cluster in one or more frequency ranges (col. 2 lines 7-17, col. 3 lines 52-60, and col. 5 lines 39-59).

Consider claim 14, Kloper further teaches the at least one additional RF module comprises a second module, and wherein the second module employs a second frequency hopping spread spectrum protocol (col. 1 lines 56-66).

Consider claims 15 and 18, Kloper further teaches the wherein the microcontroller receives and sends instructions through the second module protocol stack and transcoder to adjust the operation frequencies employed by the second module to avoid interference with the first RF module (col. 2 lines 7-17, col. 3 lines 52-60, and col. 5 lines 39-59).

Consider claims 16 and 17, Kloper further teaches the at least one additional RF module further comprises a third module employing an 802.11 protocol, wherein the microcontroller receives and sends instructions through the first module protocol stack and transcoder to adjust the operation frequencies employed by the first module to avoid interference with the frequency band associated with the third RF module (col. 16 lines 14-27).

Consider claim 19, Adachi further teaches the microcontroller receives and sends instructions through the first module protocol stack and transcoder to adjust the operation frequencies employed by the first module, wherein the first module selects hop frequencies from a one or more frequency ranges that does not substantially overlap the band employed by the third RF module (col. 2 lines 7-17, col. 3 lines 52-60, and col. 5 lines 39-59).

Consider claim 20, Adachi further teaches the microcontroller receives and sends instructions through the second module protocol stack and transcoder to adjust the operation frequencies employed by the second module, wherein the second module

selects hop frequencies from a second frequency range that does not substantially overlap the one or more frequency ranges or the frequency band employed by the third RF module (col. 2 lines 7-17, col. 3 lines 52-60, and col. 5 lines 39-59).

Consider claim 21, Klover teaches an RF communications device comprising: a first RF transceiver employing a frequency hopping spread spectrum protocol, wherein the transceiver includes capability of detection of an interferer employing a different RF communications protocol (col. 1 lines 56-66); a first frequency hopping spread spectrum protocol stack and transcoder coupled to the first RF transceiver (col. 1 lines 56-66); and a microcontroller in communication with the protocol stack, wherein the microcontroller facilitates segregation one or more frequency ranges of a set of channels employed by the first transceiver from a set of channels employed by at least one interferer employing a different RF communications protocol (col. 2 lines 7-17, col. 3 lines 52-60, and col. 5 lines 39-59).

Consider claim 22, Klover further teaches a second RF transceiver in communications with the microcontroller, wherein the second RF transceiver employs a communications protocol different from the first transceiver (col. 1 lines 56-66).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kloper in view of Kockmann et al. (U.S. PUB. 2002/0071402 hereinafter, "Kockmann").

Consider claim 3, Kloper teaches a method for avoiding interference during operation of a first RF device employing a first frequency hopping spread spectrum protocol, in conjunction with the operation of at least one other RF device employing a different communications protocol, comprising: identifying an interference from the at least one other RF device in the radio communication band; and adjusting of the first device to avoid overlap with the at least one other device, wherein hopping frequencies employed by the first device cluster in one or more frequency ranges.

Kloper does not explicitly show that the identifying an interference comprises determination of a bit error rate of frame error rate.

In the same field of endeavor, Kockmann teaches the identifying an interference comprises determination of a bit error rate of frame error rate (page 2 [0026]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, the identifying an interference comprises determination of a bit error rate of frame error rate, as taught by Kockmann, in order to determine if a carrier frequency has been interfered with. If so, and if a next frame has slots available, the lost slot(s) are resent, along with those next in queue.

Allowable Subject Matter

6. Claims 2 and 4-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any response to this action should be mailed to:

Mail Stop_____ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571) 273-8300

Hand-delivered responses should be brought to:

Customer Service Window

Randolph Building

401 Dulany Street

Alexandria, VA 22313

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571)272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay A. can be reached on (571)272-7882882. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information Consider the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan Nguyen
Examiner
Art Unit 2618


NAY MAUNG
SUPERVISORY PATENT EXAMINER